

Remarks

Currently pending in the application are Claims 9-12 and 15-23, wherein Claims 15, 17-19, and 21-23 are amended. Claims 1-8 and 13-14 are withdrawn. Claims 9-12 and 15-23 are rejected under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a).

1. – 2. Election/Restrictions

Applicants have withdrawn Claims 1-8 and 13-14 in response to the Election/Restriction requirement.

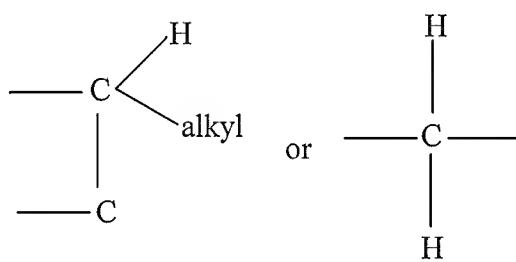
3. – 9. Rejections Under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a)

Examiner rejects Claims 9-12 and 15-23 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over United States Patent No. 1,916,776 issued to Steindorff ("Steindorff").

Applicants argue that Steindorff does not anticipate, or in the alternative, make obvious Applicants' invention. Firstly, Steindorff does not anticipate Applicants' invention. Steindorff teaches the use of a single esterified species of a hydroxylated or halogenated derivative of an aliphatic, cyclo-aliphatic, aromatic or hydroaromatic sulphonic acid. (Steindorff, Page 1, Lines 1-22). Rather, Applicants' teach the use of a mixture of esterified species. (Application, Examples 3-7). Claims 9 and 12 teach an aqueous composition of matter having a first anion and a different second anion. Claims 15 and 16 disclose an ester anion mixture of a first ester anion and a different second ester anion. Claims 17 and 18 disclose a composition of matter from which

cleansing products may be prepared comprising a first ester anion and a different second ester anion. Claims 19 and 21 disclose, respectively, a personal care cleanser and a composition of matter comprising a first acylalkylisethionate ester and a different second acylalkylisethionate ester. In each one of the Applicants' independent claims, Applicants use a mixture of two species rather than the single species taught by Steindorff. For the above reasons, Steindorff does not disclose each and every element of Applicants' invention and therefore does not anticipate Claims 9-12 and 15-23.

Applicants further argue that Steindorff does make obvious Applicants' invention. Steindorff teaches away from Applicants' invention. Steindorff teaches a suphonic acid of general formula $\text{HO}_3\text{S}-\text{R}-\text{X}$, where R may interchangeably stand for:



Steindorff therefore teaches that the substituted and unsubstituted aliphatic sulphonate backbones are equivalent. Rather, Applicants teach that the "acylalkylisethionate esters according to the present invention produced from alkyl-substituted hydroxyalkyl isethionates are much more hydrolytically stable than acylalkylisethionate esters produced from non-alkyl-substituted hydroxyalkyl isethionates, such as SCI." (Application, Paragraph 27, underlining added for emphasis). Data supporting this assertion can be found in Example 11 and Figure 3 (Application, Paragraph 87). Applicants further argue that the alkyl substitution has the surprising result of improved solubility in water that is unexpected in view of the common knowledge in the art.

Thus, it has been surprisingly found that by substituting hydrogen with C₁ to C₆ alkyl groups on one or both of the carbon atoms of the ethane sulfonate portion of an acylalkylisethionate ester, hydrolytic stability and water solubility of the acylalkylisethionate ester is drastically improved. . . This result is wholly unexpected in view of the common knowledge in the art that increasing the hydrocarbon character of a material generally results in a reduction of water solubility. (Application, Paragraph 28).

Therefore, Steindorff fails to teach, suggest, or make obvious Applicants' invention because Steindorff teaches that the substitution of the sulfonate backbone should not matter. Additionally, Applicants' invention is nonobvious because it teaches counter-intuitively that including additional alkyl groups on the sulfonate backbone has the unexpected result of increasing water solubility.

For the above reasons Steindorff fails to anticipate or make obvious Applicants' invention. Applicants respectfully submit that Claims 9-12 and 15-23 are allowable. As such, Applicants respectfully request that the Examiner allow Claims 9-12 and 15-23.

Conclusion

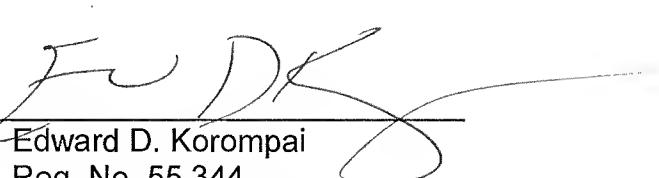
In view of the foregoing remarks, Applicants respectfully submit that the application is now in condition for allowance, and respectfully requests issuance of a Notice of Allowance directed towards the pending claims.

Should any fee be due in connection with the filing of this document, the
Commissioner for Patents is hereby authorized to deduct said fee from Deposit Account
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Respectfully Submitted,

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